

A NEW SPIDER GENUS (ARANEAE: AMAUROBIOIDEA: AMPHINECTIDAE) FROM THE WET TROPICS OF AUSTRALIA

VALERIE TODD DAVIES

Davies, V.T. 1995 12 01: A new spider genus (Araneae: Amaurobioidea: Amphinectidae) from the wet tropics of Australia. *Memoirs of the Queensland Museum* 38(2):463-469. Brisbane. ISSN 0079-8835.

The distribution of 9 species of *Kababina* gen. nov. in the rainforests of the wet tropics region of northern Queensland indicates local species richness and endemism of spiders there. The new species are *K. alta*, *K. aquilonia*, *K. colemani*, *K. covacevichae*, *K. formartine*, *K. inferna*, *K. isley*, *K. superna* and *K. yungaburra*. *Kababina* is provisionally placed in the Amphinectidae. □ *Kababina*, wet tropics, Amphinectidae.

Valerie Todd Davies, Queensland Museum, PO Box 3300, South Brisbane, Queensland 4101, Australia; 21 June 1995.

Many Australian amaurobioid spiders are recognised by their unexceptional appearance; straw-coloured carapace (often with two darker longitudinal bands), abdominal pattern of light spots in a vague chevron pattern, 3 claws and a cribellum. This new genus belongs in a large group of undescribed species with the following further characters; cephalothorax highest in the foveal region, posterior eye row straight or slightly recurved; anterior median eyes reduced. Two retromarginal and two promarginal cheliceral teeth; prolateral filamentous seta at base of fang, longer than other setae. Labium about as long as wide; sternum slightly longer than wide, pointed posteriorly. Legs 4123; notched trochanters. Feathery hairs on legs. Tarsal trichobothria increasing in length distally; bothrium collariform. Tarsal organ slit-like, broadening distally. Epigynum with medial fossa (opening) wider than long; spermathecae posterior or lateral to fossa. Male palp with rounded tegulum; course of sperm duct showing clearly. Membranous conductor; embolus with or without basal embolic apophyses, arising ventrally; without median apophysis. Tibial apophysis branched. Cribellum (two fields) present or absent in females, absent in males; proximal calamistrum with one row of setae. Colulus large when present. Anterior spinnerets largest; two major ampullate spigots of unequal size on anterior spinnerets.

MATERIALS AND METHODS

The spiders have been collected from rainforests in the Wet Tropics region of northeastern Queensland between latitudes 15°48'–17°16'S. Collection methods include litter sieving followed by heat extraction in funnels,

pitfall collection, pyrethrum spraying of fallen logs and hand collecting from under logs and at night.

Notation of spines follows Platnick & Shadab (1975). All material is lodged in the Queensland Museum (QM). Measurements are in millimetres.

ABBREVIATIONS USED

CL, carapace length; CW, carapace width; AL, abdomen length; AW, abdomen width. Eyes: AME, anterior median; ALE, anterior lateral; PME, posterior median; PLE, posterior lateral. Spinnerets: ALS, anterior; PMS, median; PLS, posterior; l, left; r, right.

Collectors: DC, D. Cook; EWQM, Earthwatch/Queensland Museum; GBM, G.B. Monteith; GT, G. Thompson, HJ, H. Janetzki; JC, J. Covacevich; NC, N. Clyde Coleman; RJR, R.J. Raven; VED, V.E. Davies.

SYSTEMATICS

Kababina gen. nov.

TYPE SPECIES

K. alta sp. nov.

DIAGNOSIS

Three-clawed cribellate. Viewed from top, eye-rows slightly recurved; AME reduced (Fig. 1B). Sternum pointed posteriorly; endite longer than wide (Fig. 1C). Feathery hairs present. Small medial epigynal fossa. Tegulum with prolateral ridge; semicircular embolus and conductor, arising ventro-retrolaterally on tegulum; without median apophysis. Male palpal tibia not much longer than wide; single long seta prolateral

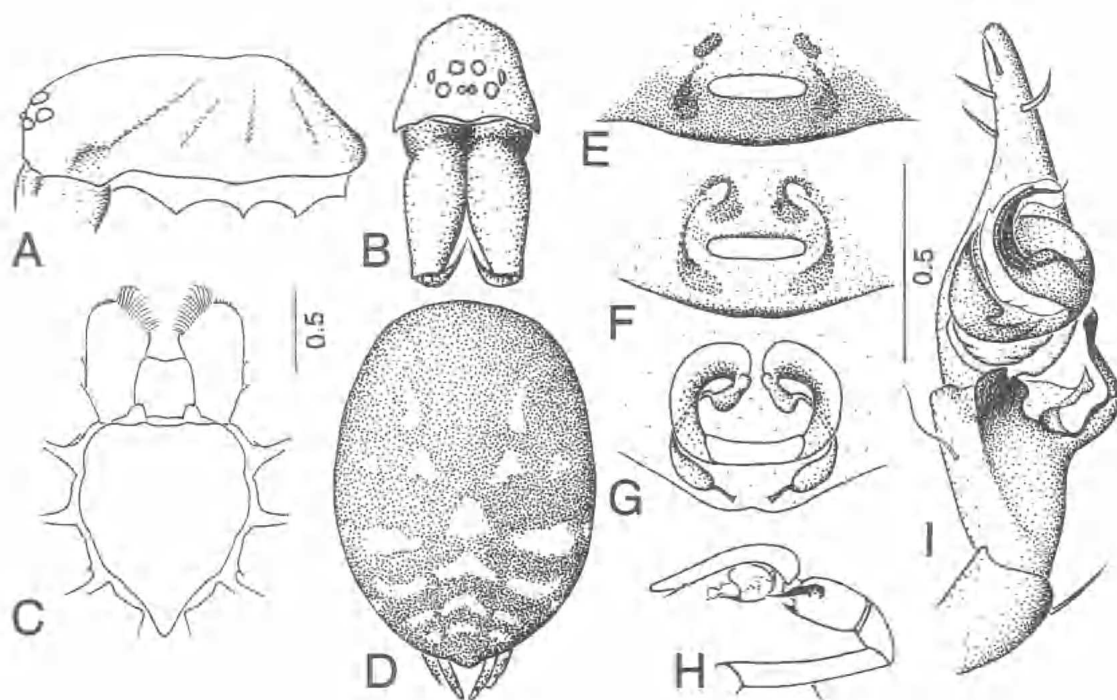


FIG. 1. A-I, *Kababina alta*. A, ♀ cephalothorax, lateral. B, ♀ eyes and chelicerae. C, cephalothorax, ventral. D, abdomen. E-G, epigynum, ventral, ventral (cleared), dorsal. H, I, ♂ palp.

to ventral portion of tibial apophysis (Fig. 1I). Paracribellar spigots present on ♀ PMS.

DESCRIPTION

Carapace straw-coloured to brown. Abdomen with pattern of pale spots (Fig. 1D). Carapace highest in foveal region (Fig. 1A). Clypeus $\times 2$ AME. Labium slightly longer than wide; endite almost twice as long as wide. Chelicera with two retromarginal and two promarginal teeth. Pro-lateral seta at base of fang longer than other setae. Legs 1423; trochanters notched. Row of tarsal trichobothria increasing in length distally; bothrium collariform (Fig. 5A); trichobothria on cymbium. Tarsal organ (Fig. 5B) slit-like broadening distally. Two cribellar fields; proximal calamistrum in ♀. Large colulus in ♂. Anterior spinnerets largest. Epigynum with wide insemination ducts running forwards, turning back at swollen glandular area, then narrowing to enter pear-shaped spermathecae. ♂ palp with branched tibial apophysis, a blunt ventral portion and two long retrolateral branches. Course of sperm duct visible postero-retrolaterally. Tracheal system simple.

REMARKS

Forster & Wilton (1973) placed most of New Zealand's amaurobioids which have a medial epigynal fossa in the Amphinectidae. *Amphinecta*, itself is characterised by having un-reduced AME, 8-9 promarginal teeth on the chelicera, preening combs on metatarsi III and IV, a median apophysis on ♂ palp, and by lacking feathery hairs. None of these characters is found in *Kababina*. However *Maniho*, placed in the Amphinectidae, has reduced AME, feathery hairs and is without preening combs and also shares with *Kababina* a general similarity of structure in epigyna and ♂ palps, though *Kababina* lacks epigynal teeth and median apophysis.

Kababina is provisionally placed in the Amphinectidae.

ETYMOLOGY

Kababina - the Aboriginal word for rainforest, Kuku-Yalanji language, Bloomfield area of northeastern Queensland.

TABLE 1. Palp and leg measurements of *Kababina alta* sp. nov.

	Femur	Patella	Tibia	Metat.	Tarsus	TOTAL
♂ palp	0.8	0.4	0.6	-	0.9	2.7
I	2.3	0.8	2.2	2.5	1.4	9.2
II	2.0	0.7	1.8	1.9	1.1	7.5
III	1.8	0.7	1.6	1.8	1.1	7.0
IV	2.2	0.8	2.3	2.5	1.3	9.1
♀ palp	0.9	0.4	0.4	-	0.9	2.6
I	2.5	0.7	2.6	2.8	1.6	10.2
II	2.0	0.6	2.0	2.0	1.3	7.9
III	1.9	0.5	1.7	1.9	1.2	7.2
IV	2.5	0.6	2.4	2.8	1.4	9.7

***Kababina alta* sp. nov.**
(Figs 1, 5)

MATERIAL EXAMINED

HOLOTYPE: QMS22807 ♀, Mt Bellenden Ker Range, 17°16'S, 145°51'E, 1054m, under logs, 17.x-5.xi.1981, EWQM.

PARATYPES: QMS22808 ♂, same data as holotype; QMS22809 ♀; QMS22812 ♀ epigynum, QMS22810 ♀, South Peak summit Mt Bartle Frere, 1620m, 6-8.xi.1981, EWQM.

DIAGNOSIS

Epigynal fossa much wider than long. Male embolus with notch; anterior retrolateral branch

of tibial apophysis lightly sclerotised and about half length of posterior branch.

DESCRIPTION

Female: CL 2.3, CW 1.6, AL 2.4, AW 1.5. Ratio of AME:ALE:PME:PLE is 4:6:6:6. Leg measurements (Table 1). Notation of spines. Femora: I, D110, P011, R001; II, D110, P011, R011; m, D110, P001, R011; IV, D110, P001, R001. Patellae: I, D101; II, D101; m, D101; IV, D101. Tibiae: I, P011, V120; II, P011, V220, R001; m, D101, P011, V110, R011; IV, D101, P011, V111, R011. Metatarsi: several spines with whorl of 4 distally. Epigynum (Fig. 1E-G) with elliptical fossa, ratio of width: length, 1:0.2. Spinnerets (Fig. 5C-G): ALS with two major ampullate spigots, one larger than the other; about 24 piriform spigots. PMS with large anterior spigot (?cylindrical) and large posterior spigot (?minor ampullate), several paracribellar spigots and some aciniform spigots. PLS with several spigots, one larger than rest (?cylindrical).

Females varied in length, 4.1-5.0.

Male: CL 2.0, CW 1.6, AL 2.0, AW 1.2. Ratio of AME:ALE:PME:PLE is 4:6:7:6. Notation of Spines. Femora: I, D011, P011, R001; II, D111, P011, R011; m, D111, P011, R001; IV, D110, P001, R101. Patellae: I, D100; II, D101; m, D101; IV, D101. Tibiae: I, P011, V220, R011; II, D001, P011, V220, R011; m, D101, P011, V110,

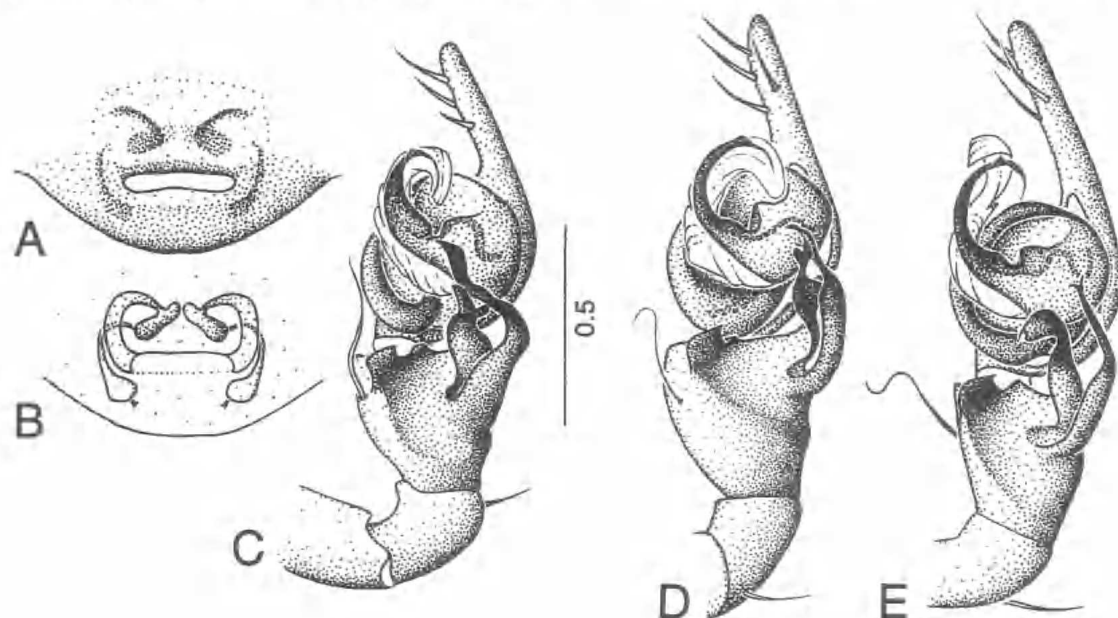


FIG. 2. A-C, *Kababina inferna*. D, *K. isley*. E, *K. yungaburra*. A, B, epigynum, ventral, dorsal. C-E, palps.

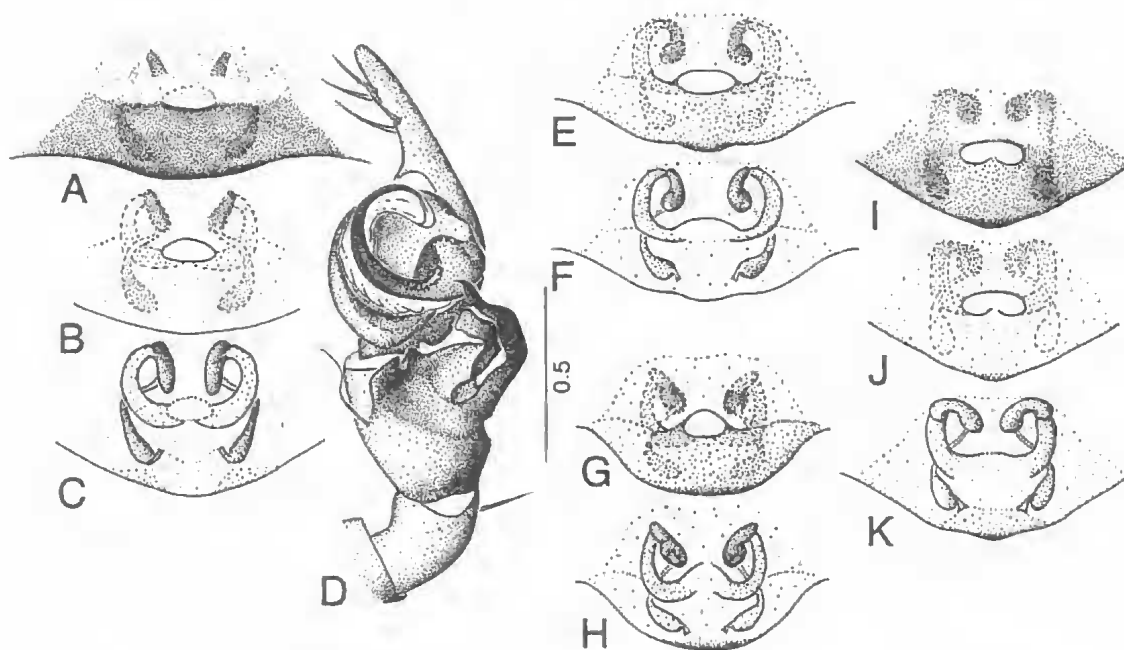


FIG. 3. A-D, *Kababina covacevichae*; E, F, *K. colemani*; G, H, *K. formartine*; I, K, *K. superna*. A-C, I-K, epigyna, ventral, ventral (cleared), dorsal; D, ♂ palp; E, F, G, H, epigyna, ventral, dorsal.

R011; IV, D101, P111, V111, R011. Metatarsi: several spines, whorl of 4-5 distally.

Male palp (Fig. 1H, I): Long femur, broad tibia; ratio of tibial length: width is 1:0.7. Tibial apophysis with blunt ventral branch and two retrolateral branches. The anterior branch short and lightly sclerotised, the posterior long, curved and heavily sclerotised. Embolus with sub-distal notch.

ETYMOLOGY

Latin, *altus*, high, referring to the altitude.

***Kababina inferna* sp. nov.**
(Fig. 2 A-C)

MATERIAL EXAMINED

HOLOTYPE: QMS22813 ♀, Mt Bellender Ker, 500m, litter, 1-7 xi, 1981, EWQM.

PARATYPES: QMS22814 ♂, same data as holotype; QMS22815 4♀ 5♂.

DIAGNOSIS

Epigynal fossa much wider than long, ratio 1:0.15. Embolus notched; anterior retrolateral branch of tibial apophysis sclerotised, almost as long as posterior.

DESCRIPTION

Female: CL 1.9, CW 1.3, AL 2.2, AW 1.5. Colour, eye size and leg spination similar to *K. alta*. Epigynum (Fig. 2 A, B) Females varied in length, 3.5-4.2.

Male: CL 1.9, CW 1.4, AL 1.9, AW 1.2; ♂ palp (Fig. 2 C), broad tibia, ratio length: width. 1:0.9. Tibial apophysis with blunt ventral portion and 2 sclerotised retroventral branches; the anterior branch bent back before ending bluntly, the posterior longer, curving and pointed. Embolus with sub-distal notch. Large colulus; ALS with 2 major ampullate spigots, one larger than the other, 18-19 piriform spigots. PMS with a few spigots, undefined. PLS with several spigots with long thin fusules (aciniform), no large spigots seen. Males varied in length, 3.2-3.8.

ETYMOLOGY

Latin, *infernus*, lower, referring to the altitude.

***Kababina isley* sp. nov.**
(Fig. 2D)

MATERIAL EXAMINED

HOLOTYPE: QMS22824 ♂, Upper Isley Ck, 17° 03'S, 145° 41'E, 750m; 29-30.xi. 1993. DC, GBM, HJ.
PARATYPE: QMS22825 ♂, same data.

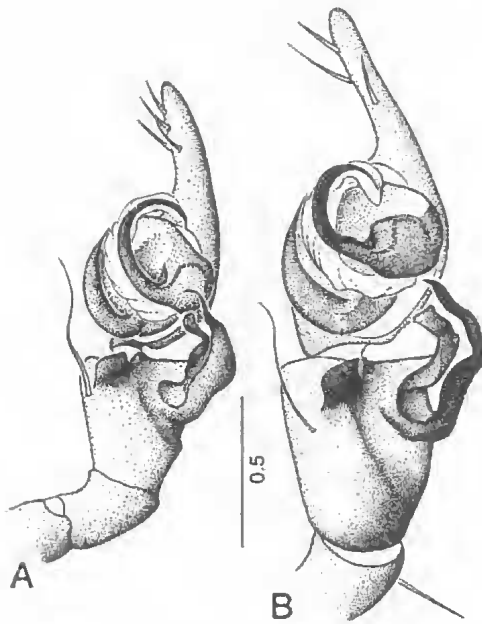


FIG. 4. A,B, *Kababina aquilonia*, ♂ palp. A, holotype; B, (Mt Spurgeon).

DIAGNOSIS

Notched embolus. Anterior retrolateral branch of tibial apophysis bifurcate.

DESCRIPTION

Male: CL 1.8, CW 1.3, AL 1.7, AW 1.0. Colour, eye size, leg spination similar to *K. alta*. Male palp (Fig. 2D), embolus notched. Tibia length: width, 1.08; anterior retrolateral branch of tibial apophysis bifurcate; posterior narrows abruptly, pointed. Paratype ♂ same size. Female unknown.

ETYMOLOGY

For Isley Creek.

***Kababina yungaburra* sp. nov.**
(Fig. 2E)

MATERIAL EXAMINED

HOLOTYPE: QMS22823 ♂, Yungaburra, 17°16'S, 145° 35'E, 700m, pitfall trap, 8-14.xii. 1988, GBM, GT.

DIAGNOSIS

Notched embolus. Anterior retrolateral branch of tibial apophysis pointed, posterior bifurcate.

DESCRIPTION

Male: CL 1.9, CW 1.5, AL 1.8, AW 1.2. Male palp (Fig. 2E). Embolus notched. Tibia length: width, 1:0.8. Tibial apophysis with blunt ventral portion, 2 sclerotised retrolateral branches, anterior pointed, posterior narrow, slightly longer, forked at tip. Female unknown.

ETYMOLOGY

For the town Yungaburra.

***Kababina covacevichae* sp. nov.**
(Fig. 3 A-D)

MATERIAL EXAMINED

HOLOTYPE: QMS22816 ♀, Shiptons Flat, 15° 48'S, 145° 45'E, under rotting log, 16-21.xi. 1975, VED, JC.
PARATYPE: QMS22817 ♂, same data.

DIAGNOSIS

Epigynal fossa wider than long, 1:0.4; glandular area of insemination duct aligned parallel to body axis. Embolus unnotched.

DESCRIPTION

Female: CL 2.0, CW 1.2, AL 2.6, AW 1.8. Coloration, eyes, leg spination similar to *K. alta*. Small epigynal fossa (Fig. 3A-C).

Male: CL 2.0, CW 1.5, AL 2.0, AW 1.3. Male palp (Fig. 3D), embolus unnotched. Broad tibia, length: width, 1:0.9. Tibial apophysis with blunt ventral portion and 2 sclerotised retrolateral branches; anterior ending bluntly, posterior curved, pointed.

ETYMOLOGY

For Jeanette Covacevich.

***Kababina superna* sp. nov.**
(Fig. 3 I-K)

MATERIAL EXAMINED

HOLOTYPE: QMS22818 ♀, Mt Lewis, 16° 34'S, 145° 16'E, 1100m, 7.xi. 1975, VED, RJR.

DIAGNOSIS

Epigynal fossa wider than long, 1:0.3; glandular area of insemination duct aligned transversely to axis of body.

DESCRIPTION

Female: CL 2.2, CW 1.5, AL 2.7, AW 1.6. Epigynal fossa width: length, 1:0.3 (Fig. 3 I-K). Male unknown.

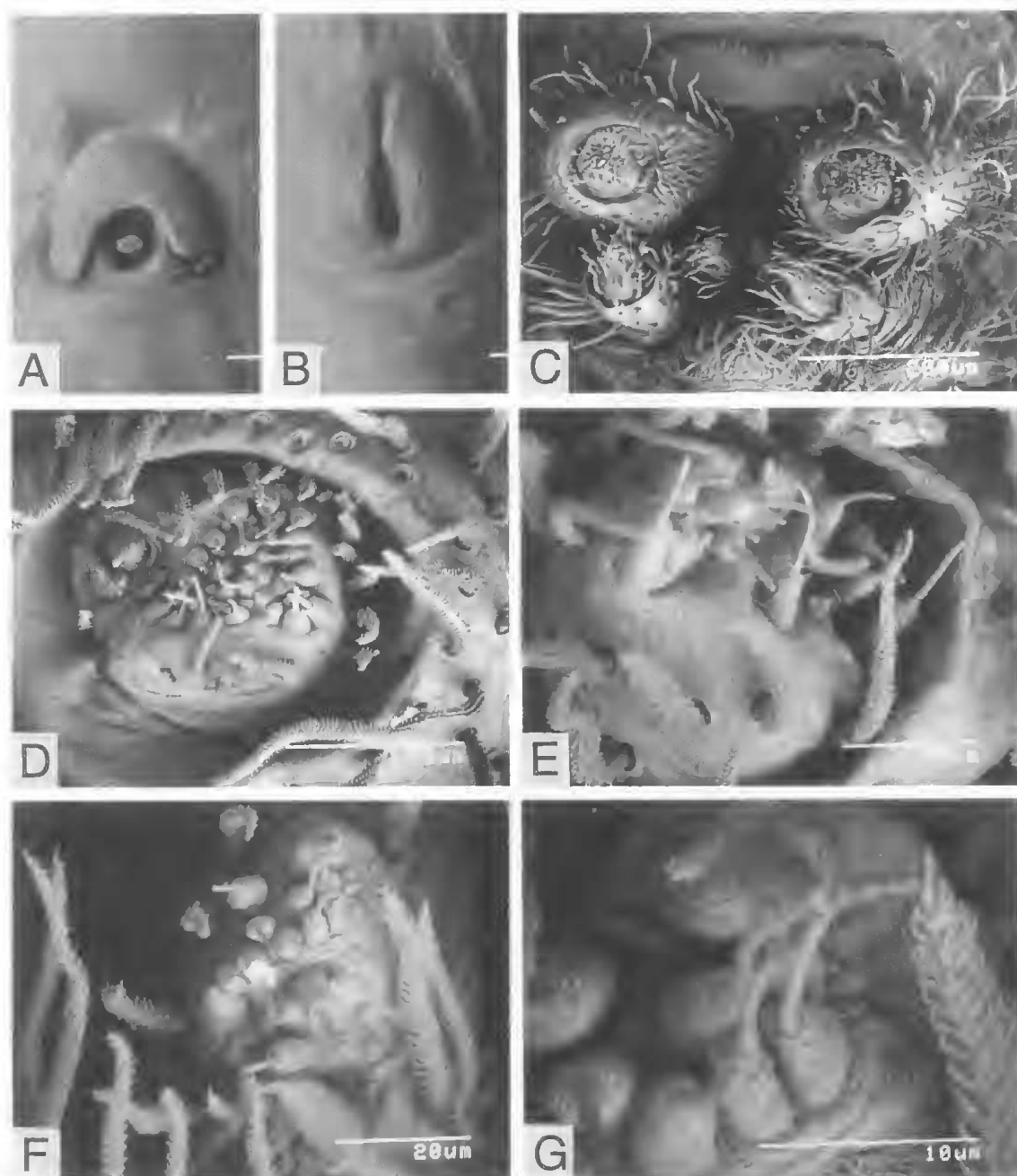


FIG. 5. A-G, ♀ *Kababina alta*. A, bothrium. B, tarsal organ. C, spinneret field. D, ALS (l). E, PLS (r). F, PMS (l). G, PMS, paracribellar spigots.

ETYMOLOGY

Latin- *supernus* - high, referring to the altitude.

***Kababina colemani* sp. nov.**
(Fig. 3 E,F)

MATERIAL EXAMINED

HOLOTYPE: QMS22821 ♀, Black Mountain, 16° 39'S, 145° 29'E, 30.i. 1972, NC.

DIAGNOSIS

Glandular area of insemination duct aligned parallel to axis of body.

DESCRIPTION

Female: CL 1.8, CW 1.4, AL 2.2, AW 1.3. Epigynal fossa width: length, 1:0.3 (Fig. 3E,F). Male unknown.

ETYMOLOGY

For the late Clyde Coleman, a north Queensland naturalist.

***Kababina formatine* sp. nov.**
(Fig. 3 G,H)

MATERIAL EXAMINED

HOLOTYPE: QMS22822 ♀, Mt Formartine South, 16° 44'S, 145° 37'E, 700m, pitfall trap, 23-24.xi. 1990, GBM, GT.

DIAGNOSIS

Epigynal fossa a little wider than long.

DESCRIPTION

Female: CL 2.1, CW 1.5, AL 2.4, AW 1.7. Epigynal fossa almost circular, width: length, 1:0.8 (Fig. 3G,H). Male unknown.

ETYMOLOGY

For Mt. Formartine.

***Kababina aquilonia* sp. nov.**
(Fig. 4A, B)

MATERIAL EXAMINED

HOLOTYPE: QMS22819 ♂, Spear Creek, nr Mt Molloy, 16° 41'S, 145° 20'E, litter, 3-10.xi. 1975, RJR, VED.

PARATYPE: QMS 22826 ♂, same data.

OTHER MATERIAL: QMS22820 ♂, Mt Spurgeon, 16° 28'S, 145° 12'E, 1100m, pitfall trap, 11-21.x.1991, GBM, HJ.

DIAGNOSIS

Unnotched embolus.

DESCRIPTION

Male: CL 2.3, CW 1.7, AL 2.3, AW 1.5. ♂ palp (Fig. 4A). Embolus unnotched. Tibial length: width, 1:0.9. Tibial apophysis with blunt ventral portion, anterior retrolateral branch lightly sclerotised ending bluntly; posterior longer, tapering to point.

Paratype ♂ smaller, 3.8. Male from Mt Spurgeon larger, (5.6) and may not be conspecific; the posterior retrolateral branch of tibial apophysis (Fig. 4B) is less tapered than the holotype.

Female unknown.

REMARKS

Males of the species can be divided into those which have a small sub-distal notch (*K. alta*, *K. inferna*, *K. isley* and *K. yungaburra*) and those without the notch, the more northerly species (*K. covacevichae*, *K. aquilonia*). Similarly females divide on the shape of the epigynal fossa; it is much wider than long in the more southern species (*K. alta*, *K. inferna*) and only a little wider than long in the remainder. The dividing line appears to be at about the latitude of Cairns (16°55'S).

ETYMOLOGY

Latin, *aquilonius*, northern.

ACKNOWLEDGEMENTS

I thank the Council of the ABRS for funding rainforest surveys during which some of this material was collected and for financial support of illustrator, Christine Lambkin. I am indebted to the Wet Tropics Management Authority for funding SEM technician, Kylie Stumkat. I acknowledge help given by "Earthwatch" and the Council for Field Research, Boston, Mass. USA for supporting the expedition to Mt Bellenden Ker. Finally thanks to the staff of the Queensland Museum, particularly Caroline Davis for her help in preparation of this paper.

LITERATURE CITED

- FORSTER, R.R. & WILTON, C.L. 1973. The spiders of New Zealand. Part IV. Otago Museum Bulletin 4: 1-184.
- PLATNICK, N.I. & SHADAB, M.U. 1975. A revision of the spider genus *Gnaphosa* (Araneae: Gnaphosidae) in America. Bulletin of the American Museum of Natural History 155: 1-66.